

CLAIMS:

1. A method for obtaining data from a computed tomography (CT) scan, comprising:
obtaining projection data from at least two detector rows in a CT system;
filtering the projection data in a direction of the at least two detector rows to obtain filtered data in which windmill artifacts are reduced; and
reconstructing image data from the filtered data.
2. The method according to Claim 1, wherein the filtering is performed in relation to at least one of a ray angle and a distance from an iso-center to a detector cell.
3. The method according to Claim 1, wherein the filtering is performed in relation to a distance from an iso-center to a voxel on a ray-sum where the ray-sum coincides with an xy-plane.
4. The method according to Claim 1, wherein the reconstructing includes backprojecting.
5. The method according to Claim 4, wherein the backprojecting includes at least one of applying Feldkamp reconstruction, advanced single-slice rebinning, applying an FFT, applying an inverse FFT, and adaptive multiple plane reconstruction.
6. An X-ray CT apparatus, comprising:
a helical scanning device configured to collect projection data while at least one of a gantry and a couch moves along an axial direction of the couch, the helical scanning device including,

an X-ray source configured to generate X-rays, and
a detector having detector elements arranged in at least two detector rows
along the axial direction and configured to produce the projection data; and
a processor comprising,
a filtering device configured to filter the projection data in a direction of the at
least two detector rows to obtain filtered data in which windmill artifacts are reduced,
and
a reconstructing device configured to reconstruct the filtered data.

7. The X-ray CT apparatus according to Claim 6, wherein the filtering device is
configured to filter the projection data based on at least one of a ray angle and a distance from
an iso-center to a detector cell.

8. The X-ray CT apparatus according to Claim 6, wherein the filtering is performed
in relation to a distance from an iso-center to a voxel on a ray-sum where the ray-sum
coincides with an xy-plane.

9. The X-ray CT apparatus according to Claim 6, wherein the reconstructing device
includes a backprojecting device.

10. The X-ray CT apparatus according to Claim 9, wherein the backprojecting device
is configured to backproject the filtered data by applying at least one of Feldkamp
reconstruction, advanced single-slice rebinning, applying an FFT, applying an inverse FFT,
and adaptive multiple plane reconstruction.

11. An X-ray CT apparatus, comprising:

a helical scanning device configured to collect projection data while at least one of a gantry and a couch moves along an axial direction of the couch, the helical scanning device including,

an X-ray source configured to generate X-rays, and

a detector having detector elements arranged in at least two detector rows along the axial direction and configured to produce the projection data; and
a processor comprising,

means for filtering the projection data in a direction of the at least two detector rows to obtain filtered data in which windmill artifacts are reduced, and

a reconstructing device configured to reconstruct the filtered data.

12. The X-ray CT apparatus according to Claim 11, wherein the means for filtering filters the projection data based on at least one of a ray angle and a distance from an iso-center to a detector cell.

13. The X-ray CT apparatus according to Claim 11, wherein the filtering is performed in relation to a distance from an iso-center to a voxel on a ray-sum where the ray-sum coincides with an xy-plane.

14. The X-ray CT apparatus according to Claim 11, wherein the reconstructing device includes a backprojecting device.

15. The X-ray CT apparatus according to Claim 14, wherein the backprojecting device is configured to backproject the filtered data by applying at least one of Feldkamp reconstruction, advanced single-slice rebinning, applying an FFT, applying an inverse FFT, and adaptive multiple plane reconstruction.

16. A computer program product storing instructions for execution on a computer system, which when executed by the computer system, causes the computer system to perform the following steps:

obtaining projection data from at least two detector rows in a CT system;

filtering the projection data in a direction of the at least two detector rows to obtain filtered data in which windmill artifacts are reduced; and

reconstructing the filtered data.

17. The computer program product according to Claim 16, wherein the filtering is performed in relation to at least one of a ray angle and a distance from an iso-center to a detector cell.

18. The computer program product according to Claim 16, wherein the filtering is performed in relation to a distance from an iso-center to a voxel on a ray-sum where the ray-sum coincides with an xy-plane.

19. The computer program product according to Claim 16, wherein the reconstructing includes backprojecting.

20. The computer program product according to Claim 19, wherein the backprojecting includes at least one of applying Feldkamp reconstruction, advanced single-slice rebinning, applying an FFT, applying an inverse FFT, and adaptive multiple plane reconstruction.